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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/325,910	06/04/1999	KEITH E. MOORE	10990146-1	3440

22879 7590 10/01/2004

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EXAMINER


SINGH, RACHNA

ART UNIT	PAPER NUMBER
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2176

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/325,910	Applicant(s) MOORE, KEITH E. 	
	Examiner Rachna Singh	Art Unit 2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 13-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-20 and 23-25 is/are allowed.
- 6) ☒ Claim(s) 1-9, 21 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communications: Amendment filed 6/8/04.
2. Claims 1-25 are pending in the case. Claims 1, 7, and 13 are independent claims. Claims 10-12 were cancelled by the amendment. Claims 23-25 were added.

Allowable Subject Matter

3. Claims 13-20 and 23-25 are allowed.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5, 7-8, and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cass, US Patent 5,692,073, 11/25/97.

In reference to claim 1, Cass teaches a method in which a processor is provided with first and second document images where the first image represents an instance of a reference document to which instance a mark has been added. See column 1, lines 37-67 through column 4, lines 1-17. Cass's method comprises the following:

-A reference document that has an associated set of active elements. The active elements are associated with at least one action. The active elements in the document is obtained and made available to the processor. The reference document serves as the original document image without the mark. See columns 1-2. Compare to ***"storing a first communication as data in a database, the storing utilizing software***

configured to save an identifier code associated with the first communication data in the database; associating at least a portion of the first communication together with the identifier code on a substrate.”

-Storing a first document image comprising digital image data in a database. See column 1-2. The first image represents an instance of a reference document to which a mark has been added. Compare to ***“changing the first communication on the substrate to form a second communication which is different from the first communication.”***

-Scanning a hardcopy instance of the first document to produce an instance of a reference hypertext document to which instance a mark has been added. Interpreting any active elements indicated in the document. See columns 3-4 and abstract.

Compare to ***“scanning the second communication and the identifier code with a scanning machine to digitize the second communication and the identifier code.”***

-Storing the marked document in a database. See column 8, lines 20-53 and figures 5 and 6.

-Providing the processor with a set of active elements for the reference (unmarked) document and extracting from the marked image a set of pixels representing the mark.

The processor interprets the extracted set of pixels representing the mark by determining whether the mark indicates any of the active elements of the reference document. Performing a reference-based mark extraction technique in which the unmarked document serves as a reference image and in which substantially the entirety of the marked document image is compared with substantially the entirety of the

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unmarked document does this. See column 3-4. Compare to ***“extracting information from the digitized identifier code with a processor . . . comparing the digitized second communication with the data of the first communication to identify differences between the second communication and the first communication”***.

Cass's system utilizes active elements within the reference (unmarked) document as a way of identifying if a mark on the other document. Cass teaches that typically paper-based systems utilize an identification number that uniquely corresponds to a particular type of form being used or specially coded information, such as a pattern of data glyphs or a bar code, included in the form is transmitted with the image. The computer can be programmed to seek coded information at the location within the received image and use the coded information together with additional information to identify what kind of form has been sent and to determine what is to be done in response to the boxes checked by the user. Cass goes on to teach a new approach of using active elements to identify specially coded information that is unlimited in appearance and layout of forms they support. Cass teaches using an identifier in the form of an active element to describe different portions of the document thus it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize identifier codes as suggested by Cass.

In reference to claim 2, Cass teaches making a mark on the reference document to form a second marked document. See columns 3-4. See figures 10-12 of Cass in which he displays the original document, the marked document, and removing the original document to only display the marks.

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In reference to claim 3, Cass teaches producing a difference document in which the differences between the reference document and the marked document are outputted. See column 13, lines 65-67 and column 14 lines 1-7. See also figures 10-12.

In reference to claim 4, Cass teaches producing a difference document in which the differences between the reference document and the marked document are outputted. See column 13, lines 65-67 and column 14 lines 1-7. See also figures 10-12.

In reference to claim 5, Cass teaches using a scanner to digitize the document and send it to the processor. While Cass does not explicitly state using a hand-held scanner, it was well known in the art at the time of the invention to utilize hand-held scanners as a means for digitizing documents. See column 7, lines 61-67 and column 8, lines 1-11.

In reference to claim 7, Cass teaches storing multiple document instances in a database. See column 8. Each image has a marked document instance which consists of references to active elements. Similar documents are indexed together. Cass further teaches that if the document is coded with a machine-readable code such as a data glyph or barcode, the machine-readable code can be used as the index of the document. See column 11, lines 20-26. Compare to ***“providing a database having multiple versions . . . having different version specific codes”***.

Cass teaches that an image of a marked document can be produced in a hardcopy document. The document can be coded with a machine-readable code such

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as a barcode that is used to index the document. See column 8, lines 20-29 and column 11, lines 20-26. Compare to ***“forming a hard copy. . .having the version specific code provided thereon in machine-readable format.”***

Cass further teaches that the machine-readable code is used to retrieve the appropriate reference document from the collection of documents given a marked document instance. The machine-readable format is read using a code-reading machine such as a scanner or fax machine. He teaches providing the processor with a set of active elements for the reference (unmarked) document and extracting from the marked image a set of pixels representing the mark. The processor interprets the extracted set of pixels representing the mark by determining whether the mark indicates any of the active elements of the reference document. Performing a reference-based mark extraction technique in which the unmarked document serves as a reference image and in which substantially the entirety of the marked document image is compared with substantially the entirety of the unmarked document does this. See column 3-4. Compare to ***“reading the machine-readable format. . .providing the document specific code and version specific code. . .wherein the second version is different than the first version.”***

Cass's system utilizes active elements within the reference (unmarked) document as a way of identifying if a mark on the other document. Cass teaches that typically paper-based systems utilize an identification number that uniquely corresponds to a particular type of form being used or specially coded information, such as a pattern of data glyphs or a bar code, included in the form is transmitted with the image. The

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computer can be programmed to seek coded information at the location within the received image and use the coded information together with additional information to identify what kind of form has been sent and to determine what is to be done in response to the boxes checked by the user. Cass goes on to teach a new approach of using active elements to identify specially coded information that is unlimited in appearance and layout of forms they support. Cass teaches using an identifier in the form of an active element to describe different portions of the document thus it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize identifier codes as suggested by Cass.

In reference to claim 8, Cass teaches producing a difference document that shows the differences between the two versions of the document. See figures 10-12.

In reference to claims 21-22, Cass teaches storing a marked document instance. Specifically Cass states, "once the image of the marked document instance has been stored in memory . . . the image is used to generate an index into a stored collection of documents from which an image of the corresponding stored reference document is retrieved . . ." Thus Cass does teach storing a document instance in the database. See column 8, lines 20+. Cass also teaches assigning bar codes or machine-readable code to the documents in the stored collection. See column 11, lines 15-25.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cass, US Patent 5,692,073, 11/25/97 in view of Belucci et al., US Patent 5,913,542, 6/22/99 and Outwater et al., US Patent 6,203,069, 3/20/01.

In reference to claim 6, Cass does not teach having a pattern which is either camouflaged or invisible to users for the identifier code; however, Belucci discloses a system in which the identification indicia are camouflaged. See figure 1B. Furthermore, Outwater discloses a system in which the label has an invisible bar code that is invisible under certain light. See abstract. Since such features for data protection was well known in the art and it was common at the time of the invention to utilize such protection when using identifiers, it would have been obvious to incorporate these features in the system of Cass.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cass, US Patent 5,692,073, 11/25/97 in view of Edens et al., US Patent 6,249,716, 6/19/01.

In reference to claim 9, Edens teaches a system for printing and finishing documents. Specifying the finishing and printing operations for a hard copy document is well known in the art of book printing. See columns 1-3 and background of the invention of Eden's in which he recites "***a method and a system in which the printing of signs that represent finishing instructions, or refer to them, on the documents is rendered entirely superfluous in that the finishing instructions are stored in a memory of a control system and are executed when the document to which they relate has--under the control of the control system--reached the position where the finishing instructions are to be executed.***" A person of ordinary skill in the art at the time of the invention would recognize that reading finishing instructions stored in memory for a document was notoriously well known in the art at the time of Applicant's invention. Thus, it would have been obvious to implement a

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finishing operation for the hard copy of the document as taught by Eden in columns 1-3 since it was common to utilize such features in document processing.

Response to Arguments

8. With respect to Claim 1, Applicant argues that Cass does not teach changing a communication which is stored in a database and storing the changed communication in the database. Examiner disagrees. Applicant states on page 9 of the Remarks filed on 6/8/04, "Referring to the recited teachings of Cass, such discloses that a user marks paper providing a marked document instance which is a copy, printout, or other rendering of a known document for which an original or other reference version has been stored in a database". Applicant's statement on page 9 illustrates and agrees with the Examiner's stance that an original document (first communication) is stored in a database. As per the second communication, Applicant argues that "Cass discloses storage of the marked document instance in memory which is available to the processor to generate an index. . .". Applicant concludes that such teachings regarding the storage of the marked document instance in memory fails to disclose the storage of the marked document instance in a database or other collection of documents disclosed to be stored in mass storage or servers. On page 8, lines 20-30, Cass states, ***"the image is said to be an image of a "document instance", rather than simply of a document, to highlight the fact that it is an image of a particular copy, printout, or other rendering of a known document for which a original or other reference version has been stored in a database. The collection of documents can be stored, for example, in mass storage or on a local file or database server, or on***

the web server". Applicant argues that Cass's teachings as cited above, do not teach that the document instance is stored in the database. Examiner points to figure 5 in which the marked document instance (510) is clearly indexed in the reference document database (520). It is clear from this figure and Cass's disclosure, that the marked document instance is stored in the reference document database. The fact that Cass's database is linked to the document instance via an index teaches the Applicant's claimed feature of **"storing a first communication as data in a database, changing the first communication on a substrate to form a second communication, and storing the second communication in the database"**.

Furthermore, in figure 6, Cass discloses generated an image-based index from image of marked document instance (421). Cass clearly teaches that the marked document instance in and **image-based index** is stored in the database. See figure 6.

Applicant request that the Examiner identify in Cass which structure allegedly corresponds to the claimed database. As stated above, Figures 5-6 and columns 8 and 10 teach this feature. Examiner also directs Applicant to claim 13 of Cass in which he states, **"a step of converting the second document instance comprises scanning a collection of hardcopy document instances including the second document instance with at least on digital scanning device, thereby producing a collection of scanned document instances in a database accessible to the processor"**.

In reference to claim 2, Applicant argues that Cass does not teach removal of a portion of the substrate having the portion of the first communication thereon. Examiner respectfully disagrees. Cass teaches removing a portion of the substrate using a

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scanner. See column 3, lines 60-67 which cites, "a scanning device scans a hardcopy instance of a first document to produce a first document image. The hardcopy instance is an instance of a document to which a mark has been added". Thus Cass does teach scanning the second communication. Cass teaches making a mark on the reference document to form a second marked document. See columns 3-4. See figures 10-12 of Cass in which he displays the original document, the marked document, and removing the original document to only display the marks. Applicant argues that the reference teachings simply shows the internal software processing and fails to disclose the claimed features. The Applicant's claim does not exclude a software process in removing a portion of the substrate. Cass teaches removing a portion of the substrate. See column 3, lines 60-67 which cites, "a scanning device scans a hardcopy instance of a first document to produce a first document image. The hardcopy instance is an instance of a document to which a mark has been added". Thus Cass does teach scanning the second communication. Cass teaches making a mark on the reference document to form a second marked document. See columns 3-4. Examiner believes that the features above disclose the Applicant's claimed invention. The mere fact that software-processing carries out the step of removing a portion of the substrate does not dismiss that the step is carried out because Applicant's claim does not lead one of ordinary skill in the art at the time of the invention to be limited to believing the process produces a hardcopy of the substrate. Applicant's claim is a step of a method that is disclosed by Cass.

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In reference to claim 9, Applicant argues that it is not obvious to staple, bind, glue, print, or form a cover page for a hardcopy of a document. Applicant further argues that there is "absolutely no evidence of record to support subjective conclusory statement by the Examiner. Examiner points Applicant column 1, Background of the invention of Eden's in which he recites ***"a method and a system in which the printing of signs that represent finishing instructions, or refer to them, on the documents is rendered entirely superfluous in that the finishing instructions are stored in a memory of a control system and are executed when the document to which they relate has--under the control of the control system--reached the position where the finishing instructions are to be executed."*** A person of ordinary skill in the art at the time of the invention would recognize that reading finishing instructions stored in memory for a document was notoriously well known in the art at the time of Applicant's invention. Thus, it would have been obvious to implement a finishing operation for the hard copy of the document as taught by Eden in columns 1-3.

In reference to claim 7, Applicant argues that Cass fails to disclose storage of a "document instance" or marked document within a database. Examiner respectfully disagrees. In column 8, lines 20+, Cass teaches storing a marked document instance. Cass states that an image of the document instance or other rendering of a known document version can be stored in a database or other collection of documents present somewhere in the system. See column 8 and rejections above. Thus Cass stores the marked document instance as a means for making available to the processor,

information about active elements and information used to generate an index into the stored collection of documents. Applicant argues that Cass fails to disclose “providing a database having multiple versions of a document stored therein as data sets and the multiple versions having a common document specific code and different version specific codes”. Examiner respectfully disagrees. In column 8 of his disclosure, Cass teaches that marked documents are stored into memory and are used to generate an index into a stored collection of documents. This stored collection of documents is analogous to having “multiple versions” since each marked document is a different “version” of the original. Furthermore, Cass teaches a symbolic indexing technique in which a hash code is generated to index a document. Cass further teaches that if the document is coded with a machine-readable code such as a data glyph or barcode, the machine-readable code can be used as the index of the document. See column 11. These codes serve as “version codes” and since they are used in an index, they also serve as a “common document specific code”. Applicant further argues in respect to claim 7 that Cass fails to teach that a processor is configured to extract at least a portion of the second version. See figures 10-12 that illustrate extraction of a portion of the second version.

In reference to claims 21 and 22, Applicant argues that the reference does not teach storing a changed communication within the database. Cass teaches storing a marked document instance. Specifically Cass states, “once the image of the marked document instance has been stored in memory . . . the image is used to generate an index into a stored collection of documents from which an image of the corresponding

stored reference document is retrieved . . .” Thus Cass does teach storing a document instance in the database. See column 8, lines 20+. Cass also teaches assigning bar codes or machine-readable code to the documents in the stored collection. See column 11, lines 15-25.

For reasons stated above and rejections above, Examiner maintains position with respect to claims 1-9 and 21-22.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachna Singh whose telephone number is 703.305.1952. Starting in mid-October, the Examiner can be reached at 571-272-4099. The examiner can normally be reached on M-F (8:30-5).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 703.305.9792. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.305.3900.

RS
9/23/04


JOSEPH FEILD
SUPERVISORY PATENT EXAMINER